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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,688	11/26/2003	Peter Gaal	030153	8929

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QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER

ELCENKO, ERIC J

ART UNIT	PAPER NUMBER
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2617

NOTIFICATION DATE	DELIVERY MODE
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05/27/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com

Office Action Summary	Application No. 10/723,688	Applicant(s) GAAL ET AL.	
	Examiner ERIC ELCENKO	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Appeal Brief filed on February, 22 2010, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Patrick N. Edouard/

Supervisory Patent Examiner, Art Unit 2617.

Response to Arguments

1. Applicant's arguments, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kim et al.

Claim Rejections - 35 USC § 101

Claims 39-41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims recite "a computer readable medium...", and there is nothing in the specification specifically excluding transitory mediums from the claims computer readable medium. Further, the USPTO Official Gazette from week #8 of 2010 (Feb 23, 2010), Volume 1351 page 212 specifically explains that the addition of the term "non-transitory" before the computer readable medium will alleviate any issues with 35 USC 101 rejections, since the claims would no longer cover non statutory subject matter. Appropriate correction is required..

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 14-24, 37, 39 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog (U.S. Pub. No. 2006/0120322) in view of Kim et al. (U.S. Pat. No. 6,870,824)

In regard to Claims 1, 19, and 42, Claim 1 being an associated method claim of an apparatus claims 19 and 37, Lindskog teaches allocating a first code to a first subscriber station, *(A request comes in for allocation of channel resources, and a specific channel resources is allocated, Abs)*

assigning a first sub-code derived from the first code to support a dedicated channel to the first subscriber station, *(depending upon the rate needed, a code is*

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broken down as shown in Fig. 2 into smaller sub-codes of the larger code to maximize the resources available., Para 25-27)

assigning a second code to support a dedicated channel to a second subscriber station; *(codes are assigned to subscriber stations as needed in the network, a first or second station would be assigned a code as per requests in the system. Depending upon the rate needed, a code is broken down as shown in Fig 2 into smaller sub-codes of the larger code to maximize resources available, Para 25-27)*

wherein the first and second sub-codes are restricted to lower data-rate transmissions as compared to the first code. *(depending on the rate, a code is broken down as shown in Fig. 2 as described in the current applications specification into a code tree of multiple rates. Lindskog teaches sub-codes being restricted to a lower data-rate transmission as compared to the main code as they are derivatives of the larger full rate code, Para 25-27)*

Lindskog does not teach assigning a second sub-code derived from the first code to support a supplemental channel to the second subscriber station. *(Specifically assigning a second channel to a single mobile station)*

Kim teaches a supplemental channel generator. The supplemental channel having a scheduled negotiating rate. An unused code that is not assigned to the other channel generators *(leftovers of the orthogonal codes)* are assigned to the supplemental channel generator to spread the signal on the supplemental channel with the assigned orthogonal code. *(the supplemental channels are assigned the leftover codes unused by the dedicated channels. This is read upon as the sub-codes derived*

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from a first code as the unused part of a first code could be used for any subscriber station needing a supplemental channel, whether it be a second station a third station, etc. the unused will be used for the supplemental as necessary for assignment to a mobile station, Col 6, Ln 31-63)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Linskog to include the teaching of Kim as described above. One of ordinary skill in the art could have combined the known prior art elements using known techniques to yield predictable results to one of ordinary skill in the art.

In regard to Claims 2 and 20, Kim teaches assigning a third sub-code derived from the first code to support a second supplemental channel to the second subscriber station. *(Kim teaches a supplemental channel generator using unused codes for the supplemental channels, Col 6, Ln 31-63) As discussed above the additional space from a channel could be used to support other channels from a first code)*

In regard to Claims 3 and 21, it is obvious to one of ordinary skill in the art that that in a communication system at any time there can be a mobile in soft hand off and one not in soft handoff. There can also be none in soft handoff. The allocation of a code to a mobile in soft-hand off would only constitute holding the resource in the first cell for additional time. (Para 65)

In regard to Claims 4 and 22, Linskog teaches separating communications to the second subscriber station into first and second portions. Spreading the first portion of the communication with the second code and spreading the second portion of the communications with the second sub-code. *(spreading codes are assigned to a forward-*

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link connections from a first set of orthogonal odes as long as there are codes available in the first set. When no more codes are available, codes from a second set Are assigned. Para 4)

In regard to Claims 5 and 23, Lindskog teaches he first sub-code comprises a plurality of concatenated copies of the first code. (Para 28)

In regard to Claims 6 and 24, Lindskog teaches signaling to the second subscriber the first code. (Para 27-30)

In regard to Claims 14 and 41, Lindskog teaches receiving information from a base station comprising a first code, *(A request comes in for allocation of channel resources, and a specific channel resources is allocated, Abs)*

searching through the first code to locate a sub-code, (depending upon the rate needed, a code is broken down as shown in Fig. 2 into smaller sub-codes of the larger code to maximize the resources available., Para 25-27)

dispreading a dedicated channel fro the base station with a second code, (It is reasonable for one of ordinary skill in the art to assume this process can be done for multiple mobile stations for assigning a second code to support a dedicated channel to the second subscriber station. (depending upon the rate needed, a code is broken down as shown in Fig 2 into smaller sub-codes of the larger code to maximize resources available, Para 25-27)

wherein the first and second sub-codes are restricted to lower data-rate transmissions as compared to the first code. (depending on the rate, a code is broken down as shown in Fig. 2 as described in the current applications specification into a

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code tree of multiple rates. Lindskog teaches sub-codes being restricted to a lower data-rate transmission as compared to the main code as they are derivatives of the larger full rate code, Para 25-27)

Lindskog does not teach disspreading a supplemental channel with a sub-code and communicating on the dedicated and supplemental channels.

Kim teaches a supplemental channel generator. The supplemental channel having a scheduled negotiating rate. An unused code that is not assigned to the other channel generators (*leftovers of the orthogonal codes*) are assigned to the supplemental channel generator to spread the signal on the supplemental channel with the assigned orthogonal code. (*the supplemental channels are assigned the leftover codes unused by the dedicated channels. This is read upon as the sub-codes derived from a first code as the unused part of a first code could be used for any subscriber station needing a supplemental channel, whether it be a second station a third station, etc. the unused will be used for the supplemental as necessary for assignment to a mobile station, Col 6, Ln 31-63*)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lindskog to include the teaching of Kim as described above. One of ordinary skill in the art could have combined the known prior art elements using known techniques to yield predictable results to one of ordinary skill in the art.

In regard to Claims 15 and 16 , Lindskog teaches wherein the information comprises a plurality of codes including the first code and the first code containing the sub-code. (Para 28)

In regard to Claims 17 and 18, Lindskog teaches wherein the information is carried on the dedicate channel. (*dedicated channel is used for communication between the base station and the mobile station, Fig. 1, Para 28*)

In regard to Claims 37 and 39, Lindskog teaches allocating a first code to a first subscriber station, (*A request comes in for allocation of channel resources, and a specific channel resources is allocated, Abs*)

assigning a first sub-code derived from the first code to support a dedicated channel to the first subscriber station, (*depending upon the rate needed, a code is broken down as shown in Fig. 2 into smaller sub-codes of the larger code to maximize the resources available., Para 25-27*)

assigning a second code to support a dedicated channel to a second subscriber station; (*codes are assigned to subscriber stations as needed in the network, a first or second station would be assigned a code as per requests in the system. Depending upon the rate needed, a code is broken down as shown in Fig 2 into smaller sub-codes of the larger code to maximize resources available, Para 25-27*)

wherein the first and second sub-codes are restricted to lower data-rate transmissions as compared to the first code. (*depending on the rate, a code is broken down as shown in Fig. 2 as described in the current applications specification into a code tree of multiple rates. Lindskog teaches sub-codes being restricted to a lower data-rate transmission as compared to the main code as they are derivatives of the larger full rate code, Para 25-27*)

Lindskog does not teach assigning a second sub-code derived from the first code to support a supplemental channel to the second subscriber station. (*Specifically assigning a second channel to a single mobile station*)

Kim teaches a supplemental channel generator. The supplemental channel having a scheduled negotiating rate. An unused code that is not assigned to the other channel generators (*leftovers of the orthogonal codes*) are assigned to the supplemental channel generator to spread the signal on the supplemental channel with the assigned orthogonal code. (*the supplemental channels are assigned the leftover codes unused by the dedicated channels. This is read upon as the sub-codes derived from a first code as the unused part of a first code could be used for any subscriber station needing a supplemental channel, whether it be a second station a third station, etc. the unused will be used for the supplemental as necessary for assignment to a mobile station, Col 6, Ln 31-63*)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lindskog to include the teaching of Kim as described above. One of ordinary skill in the art could have combined the known prior art elements using known techniques to yield predictable results to one of ordinary skill in the art.

3. Claims 7,25, 38 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog (U.S. Pub. No. 2006/0120322) in view of Scherzer et al. (U.S. Pub. No. 6,901,062)

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In regard to Claims 7, 25, 38 and 40, Lindskog teaches allocating a different first code from a plurality of orthogonal codes to each of the subscriber stations; *(A request comes in for allocation of channel resources, and a specific channel resources is allocated, Abs,)*

assigning each subscriber station either its first allocated code or a first sub-code derived from its allocated first code to support a dedicated channel, *(It is reasonable for one of ordinary skill in the art to assume this process can be done for multiple mobile stations for assigning a second code to support a dedicated channel to the second subscriber station, Para 25-27)* assigning a second sub-code derived from one of the first codes to support a communications channel to one of the subscriber stations. *(Lindskog teaches when assigning a code to a channel the codes not used in the allocation to the first channel are available for future allocation to provide other channels. Para 28)*

wherein the first and second sub-codes are restricted to lower data-rate transmissions as compared to the first code. *(depending on the rate, a code is broken down as shown in Fig. 2 as described in the current applications specification into a code tree of multiple rates. Lindskog teaches sub-codes being restricted to a lower data-rate transmission as compared to the main code as they are derivatives of the larger full rate code, Para 25-27)*

Lindskog does not teach separating a plurality of mobile stations into groups.

Scherzer teaches grouping the subscriber stations in a number of groups (e.g., M groups) and allocating resources to subscriber stations in groups. (Col 9, Ln 33-55)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lindskog to include the teaching of Scherzer in order for a larger number of subscriber stations to be handled and provide more efficient server while taking into a larger group of connections rather than a single mobile stations.

4. Claims 8-13 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination as applied to claim 7 above, and further in view of Kim et al. (U.S. Pat. No. 6,870,824)

In regard to Claims 8 and 26, Lindskog teaches assigning a second code to support a dedicated channel to said one of the subscriber stations in the second group, *(It is reasonable for one of ordinary skill in the art to assume this process can be done for multiple mobile stations for assigning a second code to support a dedicated channel to the second subscriber station. (depending upon the rate needed, a code is broken down as shown in Fig 2 into smaller sub-codes of the larger code to maximize resources available, Para 25-27)*

Kim teaches a supplemental channel generator. The supplemental channel having a scheduled negotiating rate. An unused code that is not assigned to the other channel generators *(leftovers of the orthogonal codes)* are assigned to the supplemental channel generator to spread the signal on the supplemental channel with the assigned orthogonal code. *(the supplemental channels are assigned the leftover codes unused by the dedicated channels. This is read upon as the sub-codes derived from a first code as the unused part of a first code could be used for any subscriber*

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station needing a supplemental channel, whether it be a second station a third station, etc. the unused will be used for the supplemental as necessary for assignment to a mobile station, Col 6, Ln 31-63)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination to include the teaching of Kim as described above. One of ordinary skill in the art could have combined the known prior art elements using known techniques to yield predictable results to one of ordinary skill in the art.

In regard to Claims 9 and 27, Lindskog teaches separating communications to the second subscriber station into first and second portions. Spreading the first portion of the communication with the second code and spreading the second portion of the communications with the second sub-code. *(spreading codes are assigned to a forward-link connections from a first set of orthogonal odes as long as there are codes available in the first set. When no more codes are available, codes from a second set Are assigned. Para 4)*

In regard to Claims 10 and 28, Joshi teaches assigning a third sub-code derived from the first code to support a second supplemental channel to the second subscriber station. *(Joshi teaches assigning up to seven additional supplemental channels, Para 3—31) As discussed above the additional space from a channel could be used to support other channels from a first code.(Para 27, 29 , 36 and 43)*

In regard to Claims 11 and 29, it is obvious to one of ordinary skill in the art that that in a communication system at any time there can be a mobile in soft hand off and one not in soft handoff. There can also be none in soft handoff. The allocation of a

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code to a mobile in soft-hand off would only constitute holding the resource in the first cell for additional time. (Para 65)

In regard to Claims 12 and 30, Lindskog teaches the first sub-code comprises a plurality of concatenated copies of the first code. (Para 28)

In regard to Claims 13 and 31, Lindskog teaches signaling to the second subscriber the first code. (Para 27-30)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC ELCENKO whose telephone number is (571)272-8066. The examiner can normally be reached on M-F 7:30 AM through 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric Elcenko/

/Patrick N. Edouard/
Supervisory Patent Examiner, Art Unit 2617